

Exploring the Extreme			
1997 Mathematics			
Content Standards			
California Mathematics			
Grade 3			
Activity/Lesson	State	Standards	
Changing the Center of Gravity Using Moment Arms	CA	MA.3.AF.2.1	Solve simple problems involving a functional relationship between two quantities (e.g., find the total cost of multiple items given the cost per unit).
Changing the Center of Gravity Using Moment Arms	CA	MA.3.MR.2.3	Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.
Exploring the Extreme			
1997 Mathematics			
Content Standards			
California Mathematics			
Grade 4			
Activity/Lesson	State	Standards	
Changing the Center of Gravity Using Moment Arms	CA	MA.4.MR.2.3	Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.
Exploring the Extreme			
1997 Mathematics			
Content Standards			
California Mathematics			
Grade 5			
Activity/Lesson	State	Standards	
Jet Propulsion	CA	MA.5.MR.2.3	Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.
Center of Gravity, Pitch, Yaw	CA	MA.5.NS.1.1	Estimate, round, and manipulate very large (e.g., millions) and very small (e.g., thousandths) numbers.
Exploring the Extreme			
1997 Mathematics			
Content Standards			
California Mathematics			
Grade 6			
Activity/Lesson	State	Standards	
Jet Propulsion	CA	MA.6.AF.1.1	Write and solve one-step linear equations in one variable.
Jet Propulsion	CA	MA.6.AF.1.2	Write and evaluate an algebraic expression for a given situation, using up to three variables.

Jet Propulsion	CA	MA.6.MR.2.3	Estimate unknown quantities graphically and solve for them by using logical reasoning and arithmetic and algebraic techniques.
Jet Propulsion	CA	MA.6.MR.2.4	Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.
Fuel Efficiency	CA	MA.6.SDAP.2.5	Identify claims based on statistical data and, in simple cases, evaluate the validity of the claims.
Fuel Efficiency	CA	MA.6.MR.2.3	Estimate unknown quantities graphically and solve for them by using logical reasoning and arithmetic and algebraic techniques.
Fuel Efficiency	CA	MA.6.MR.2.4	Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.
Exploring the Extreme			
1997 Mathematics			
Content Standards			
California Mathematics			
Grade 7			
Activity/Lesson	State	Standards	
Jet Propulsion	CA	MA.7.MR.2.5	Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.
Fuel Efficiency	CA	MA.7.AF.1.5	Represent quantitative relationships graphically and interpret the meaning of a specific part of a graph in the situation represented by the graph.
Fuel Efficiency	CA	MA.7.MR.2.3	Estimate unknown quantities graphically and solve for them by using logical reasoning and arithmetic and algebraic techniques.
Fuel Efficiency	CA	MA.7.MR.2.5	Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.
Exploring the Extreme			
1997 Mathematics			
Content Standards			
California Mathematics			
Grades 8-12 (Algebra II)			
Activity/Lesson	State	Standards	

Fuel Efficiency	CA	MA.8-12.All.9.0	Students demonstrate and explain the effect that changing a coefficient has on the graph of quadratic functions; that is, students can determine how the graph of a parabola changes as a, b, and c vary in the equation $y = a(x - b)^2 + c$.
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